

Patent Claims:

1 – 14 (canceled)

15. (new) A device for monitoring an electric power station, comprising:
an analysis module that includes a dynamic model of a system of the electric power station;
operational data or operational and structural data from the electric power station conveyed to the analysis module as input data; and
an algorithm based on artificial intelligence included by the analysis module that searches for dependencies between operational data, operational and structural data in operational data, or operational and structural data from the system by a method of artificial intelligence and integrating into the dynamic model the data correlations identified as new correlations to improve the dynamic model of the system during the operation of the system, wherein output data that characterizes the current and/or future operational behavior of the system is identifiable by the analysis model.

16. (new) The device according to Claim 15, wherein the improvement of the dynamic model includes the identification of the input data that has not been previously used by the dynamic model and the dynamic model is expanded with the help of this input data.

17. (new) The device according to Claim 15, wherein the dynamic model further comprises an element from the group consisting of: a physical equation, a neural network, fuzzy logic, and a genetic algorithm.

18. (new) The device according to Claim 15, wherein the dynamic model includes an neural network that is trained using historical operational data from the system.

19. (new) The device according to Claim 15, wherein a number of analysis modules are available and include a dynamic model of a system of the electric power station and an additional algorithm based on artificial intelligence is provided by correlations between the input and output data of a first of the analysis modules and the input and/or output data of a second of the analysis modules are identifiable.

20. (new) The device according to Claim 15, wherein a number of analysis modules are available and include a dynamic model of a system of the electric power station and an additional algorithm based on artificial intelligence is provided by correlations between the input or output data of a first of the analysis modules and the input and/or output data of a second of the analysis modules are identifiable.

21. (new) The device according to Claim 19, wherein the additional output data is identifiable by the correlations and the data characterizes the current and/or future operational behavior of the electric power station,
whereby this additional output data includes cross-system information.

22. (new) The device according to Claim 20, wherein the additional output data is identifiable by the correlations and the data characterizes the current and/or future operational behavior of the electric power station,
whereby this additional output data includes cross-system information.

23. (new) The device according to Claim 15, wherein the operational data and/or structural data of the technical facility includes one or more items of information from the group consisting of: process data, operational messages, warning messages, disruption messages, monitoring notifications, comments, design of the electric power station, hierarchy of the electric power station, and combinations thereof.

24. (new) The device according to Claim 15, wherein the operational or structural data of the electric power station includes current and/or historical data from the technical facility.

25. (new) The device according to Claim 15, wherein the operational and structural data of the electric power station includes current and/or historical data from the technical facility.

26. (new) The device according to Claim 15, wherein the operational data and structural data from the electric power station is provided by a process control system of the electric power station.

27. (new) The device according to Claim 15, wherein the operational data or structural data from the electric power station is provided by a process control system of the electric power station.

28. (new) The device according to Claim 15, wherein the algorithm based on artificial intelligence improves the interaction of the individual correlations of the dynamic model such that an interrelationship develops and parameterizes the algorithm based on artificial intelligence for this interrelationship.

29. (new) A method for monitoring a technical installation, comprising:
conveying operational data or operational and structural data from the technical installation to a dynamic model of at least one system of the technical installation as input data;

improving the dynamic model of the system during the operation of the system by an algorithm based on artificial intelligence and dependencies between operational data or operational and structural data are searched for in operational data or operational and structural data by methods of artificial intelligence and correlations identified are integrated into the dynamic model as new correlations; and

identifying output data by the dynamic model which characterizes the current and/or future operational behavior of the system.

30. (new) The method according to Claim 29, wherein the improvement of the dynamic model includes the identification of the input data which has not yet been previously used by the dynamic model and the dynamic model is expanded with the help of this input data.

31. (new) The method according to Claim 29, wherein a number of dynamic models are provided and in each case describe a system of the technical installation and an additional algorithm based on artificial intelligence is provided and by correlations between the input and output data of a first of the dynamic models and the input and/or output data of a second of the dynamic models are identifiable.

32. (new) The method according to Claim 29, wherein a number of dynamic models are provided and in each case describe a system of the technical installation and an

additional algorithm based on artificial intelligence is provided and by correlations between the input or output data of a first of the dynamic models and the input and/or output data of a second of the dynamic models are identifiable.

33. (new) The method according to Claim 31, characterized in that additional output data is identifiable by the correlations, the data characterizing the current and/or future operational behavior of the technical installation,
whereby this additional output data includes cross-system information.

34. (new) The method according to Claim 32, characterized in that additional output data is identifiable by the correlations, the data characterizing the current and/or future operational behavior of the technical installation,
whereby this additional output data includes cross-system information.